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August 1, 2003

**Via Electronic Submission**

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC 20554

David Solomon, Chief  
Enforcement Bureau  
Federal Communications Commission  
445 12th Street, SW  
Washington, D.C. 20554

John Muleta, Chief  
Wireless Telecommunications Bureau  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC 20554

Re: Minnesota Southern Cellular Telephone Company and Minnesota Southern Wireless  
Company d/b/a HickoryTech  
E911 Interim Report  
In the Matter of Revision of the Commission's Rules to Ensure Compatibility  
With Enhanced 911 Emergency Calling Systems  
CC Docket No. 94-102

Dear Ms. Dortch:

On behalf of Minnesota Southern Cellular Telephone Company and Minnesota Southern Wireless Company d/b/a HickoryTech ("HickoryTech") we hereby submit their report on the status of their implementation of E911 services. HickoryTech is a Tier III carrier as defined in *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, Order to Stay (rel. July 26, 2002), FCC 02-210(2002)(*Non-Nationwide Carrier Order*). This report is submitted in compliance with the terms of the *Non-Nationwide Carrier Order*.

If you have any questions or require additional information with respect to the Interim Report, please do not hesitate to call.

Best regards,

/s/ Joshua P. Zeldis

Joshua P. Zeldis

Enclosures

cc: Qualex International (FCC Copy Contractor)

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**Report to the Federal Communications Commission on Carrier Efforts Toward Attaining Wireless Enhanced 911 Deployment and Implementation, as Provided by CC Docket No. 94-102, In the Matter of Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems**

Minnesota Southern Cellular Telephone Company and Minnesota Southern Wireless Company d/b/a HickoryTech ("HickoryTech"), by its attorneys, pursuant to the Federal Communications Commission's ("Commission") *Non-Nationwide Carrier Order*<sup>1</sup> and *Public Notice*<sup>2</sup> in CC Docket No. 94-102, hereby file an Interim Report, detailing their efforts towards attaining the benchmarks established in the *Non-Nationwide Carrier Order* and with other applicable provisions of the wireless Enhanced 911 ("E911") rules.

In its *Non-Nationwide Carrier Order*, the Commission granted a temporary stay to select carriers from the application of certain specific E911 Phase II deadlines set forth in section 20.18(f) and (g) of the Commission's rules.<sup>3</sup> In order to assist in monitoring Tier III carriers' E911 deployment progress, the Commission required that Tier III carriers file an Interim Report to provide specific, verifiable information to allow the Commission to track compliance with the Commission's benchmarks. In compliance with the *Non-Nationwide Carrier Order*, HickoryTech now files this instant report with the Commission.

**I. Carrier Background**

HickoryTech provides analog and digital AMPS/TDMA CMRS wireless service in the Minnesota 10-Le Sueur RSA<sup>4</sup>, Minneapolis-St. Paul, MN/WI A2 MSA<sup>5</sup>, Rochester-Austin-

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<sup>1</sup> In the Matter of Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems, *Non-Nationwide Carrier Order*, CC Docket No. 94-102, Order to Stay (rel. July 26, 2002), ("*Non-Nationwide Carrier Order*").

<sup>2</sup> Wireless Telecommunications Bureau Provides Further Guidance on Interim Report Filings by Small Sized Carrier, Public Notice, CC Docket No. 94-102, (rel. June 30, 2003) ("*Public Notice*").

<sup>3</sup> HickoryTech was identified as a Tier III carrier and was included in the list of non-nationwide carriers granted a temporary stay. See, *Non-Nationwide Carrier Order*, ¶ 23 and Appendix A.

<sup>4</sup> Station KNKN572.

<sup>5</sup> Station KNKR320.

Albert Lea, MN BTA<sup>6</sup> and Mankato-Fairmont BTA<sup>7</sup>. In the near future, HickoryTech is contemplating plans to overlay an alternate digital technology for the majority of its network.

## **II. E911 Deployment**

### **A. Phase I**

HickoryTech has received a “blanket” Phase I service request from the State of Minnesota and is currently in the process of deploying E911 Phase I service to PSAPs throughout its service area. To date, HickoryTech has deployed E911 Phase I service to ten (10) PSAPs, which is approximately 80% of its network. HickoryTech anticipates that it will provide E911 Phase I service to the remaining PSAPs for which it has received an E911 Phase I request by August 2003.

### **B. Phase II Requests**

HickoryTech has also received a statewide Phase II service request from the State of Minnesota. HickoryTech will continue to work towards deploying E911 Phase II service in 100% of its network but because of difficulties in E911 Phase II deployment, discussed in more detail below, it is unsure when that will be completed and what level of accuracy will ultimately be achieved.

### **C. E911 Equipment Order/Installation Status**

HickoryTech is deploying a network-based E911 Phase II solution in a good-faith effort to fulfill the Commission’s E911 mandate. HickoryTech chose a network-based solution because, after exploring all available options, HickoryTech was unable to find any TDMA handsets that provided ALI-functionality. Accordingly, the network-based solution was the only option available to HickoryTech. HickoryTech has worked diligently with its third-party location solution vendors, TCS Corp. and Grayson Communications, as well as the public safety community in proceeding to deploy its network-based facilities. HickoryTech began installing the network equipment at its sites in April of 2002. To date, HickoryTech has deployed this equipment at a total of 24 cell sites, which are 100% of its cell sites providing service to the Minnesota RSA 10; a geographic area of approximately 2500 square miles. This deployment was made utilizing HickoryTech’s existing antenna configurations at each of these cell sites. Preliminary testing to date has indicated that the results fall short of meeting the FCC’s accuracy standards. HickoryTech is proceeding to work with the PSAPs in preparation of offering locational services to the achievable accuracy level.

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<sup>6</sup> Station KNLG880.

<sup>7</sup> Station KNLG874.

HickoryTech currently anticipates that it will be able to provide E911 Phase II service to 68% of its sites by September 1, 2003, although the service in that area is expected to fall short of meeting the FCC accuracy requirements. In addition to the 24-cell site deployment in Minnesota RSA 10, HickoryTech has also deployed equipment at 5 out of 12 sites in the Minneapolis Metro A2 market. These are the two licenses that HickoryTech owned at the time the blanket Phase II request was made. Subsequent to receipt of that Phase II request, HickoryTech has since acquired two additional licenses and has installed the E911 Phase II solution in 3 out of 7 sites in the Mankato BTA but has not yet begun deployment at its 4 sites in the Rochester BTA. HickoryTech has also included the Grayson Communications E911 Phase II solution in the 6 new sites that it is constructing this year, bringing the percentage of E911 Phase II-capable sites to 72% of its total site count. Despite these efforts, HickoryTech is unsure whether it will be able to provide E911 Phase II service to 50% of its service area within each requesting PSAP's coverage area by September 1, 2003. Absent a voluntary agreement with the triggering PSAPs, HickoryTech may need to seek temporary relief in certain requesting areas.

HickoryTech is concerned that the remaining sites requiring E911 Phase II service are in areas that are isolated from the rest of the network and will require additional technology to even achieve marginal accuracy. Moreover, HickoryTech is uncertain whether the existing alternate technologies, such as AOA antennas, can even be accommodated on the towers that HickoryTech leases.

#### **D. Difficulties in Implementation**

HickoryTech has had great difficulty in obtaining an E911 Phase II solution that will work within its network. In attempting to find an E911 Phase II solution that would meet the Commission's accuracy standards, HickoryTech has explored every possible solution and has determined that the Grayson Communications E911 Phase II solution was the only viable alternative for its TDMA network.

In addition to the technical problems associated with a large-scale rural-only deployment, HickoryTech has encountered a number of other difficulties. Specifically, HickoryTech has incurred problems with obtaining equipment, engineering and support from Grayson Communications to upgrade its network, resulting in a 6-month delay. Presumably, the limited Vendor resources were focused on meeting the needs of its large urban carrier clients.<sup>8</sup> In addition, HickoryTech had a problem with Qwest Communications providing interconnection to the selective router for HickoryTech's mobile positioning center provider, TCS Corporation, and with the provider's installation and support of the Phase II software, which resulted in another 6-

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<sup>8</sup> In the Matter of Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems, *Non-Nationwide Carrier Order*, CC Docket No. 94-102, Letter from AT&T Wireless Services, Inc. to Marlene Dortch Regarding Validation Testing (dated. July 2, 2003).

month delay. An additional 3-month delay occurred when Grayson Communications and TCS Corporation could not agree on the type of circuit that was necessary to connect their equipment together.

Finally, HickoryTech has incurred a great deal of delay, in addition to frustration, with PSAPs that are not E911 Phase II capable despite having made the request for E911 Phase II service. HickoryTech is a small company that has limited resources to invest in the Commission's mandates, regulatory and legal matters, site/switch engineering and construction, as well as other network enhancements. Avoidable delays have been created when Phase II requesting PSAPs have not been capable of fulfilling their responsibility for upgrades, thus delaying the provision of E911 Phase II service. HickoryTech sought to avoid such delays by contacting the State of Minnesota, that issued the Phase I and Phase II requests, about PSAP readiness, but was told on three separate occasions that the PSAPs were ready for E911 Phase II service. Only after spending a considerable amount of time and money upgrading equipment for E911 Phase II deployment, was HickoryTech informed that certain PSAPs had not even begun the process of upgrading to E911 Phase II readiness. Such instances have diverted money, time and effort from those PSAPs in HickoryTech's coverage area that are Phase II capable.

Despite all of its efforts to timely deploy a network-based E911 Phase II solution, HickoryTech is not confident that it will be able to achieve the Commission's Phase II accuracy standards. This concern centers around the fact that rural deployments, such as HickoryTech's lack the requisite cell site density to enable network-based solutions to provide sufficient triangulation. In many cases, coverage is provided from a single cell site with only sufficient overlap to allow for reliable call hand-offs. Specifically, HickoryTech has in its system very remote cell sites that have over 90 miles between them, with only sufficient overlap to allow for reliable call hand-offs and no ability to triangulate. Along major rural highways, cell sites are often laid out in a "string of pearls" affording little opportunity for any meaningful triangulation to occur, system modification to provide sufficient accuracy with current network-based solutions would appear to require the construction of numerous additional cell sites which would not be economically feasible. Accordingly, HickoryTech, as a member of the Tier III Coalition for Wireless E911, has petitioned the Commission to forbear, until December 31, 2005, from enforcing the quantitative accuracy standards set forth in Section 20.18(h)(1) and (2) of the Rules.<sup>9</sup>

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<sup>9</sup> *Petition Pursuant to 47 U.S.C. §160(c) for Forbearance from E911 Accuracy Standards Imposed on Tier III Carriers for Locating Wireless Subscribers Under Rule Section 20.18(h)*, WT Docket No. 02-377 (November 20, 2002).

### **III. Conclusion**

As demonstrated above, HickoryTech has diligently sought a Phase II solution that will meet the Commission's Phase II accuracy standards. This effort has come at the expense of significant personnel and financial resources. HickoryTech continues to be committed to working with its PSAPs to deliver E911 Phase II service that meets the Commission's accuracy standards as soon as technically feasible but does not believe that this will be economically achievable with currently available network-based technologies.

Respectfully Submitted,

Minnesota Southern Cellular Telephone Company and  
Minnesota Southern Wireless Company d/b/a  
HickoryTech Wireless

August 1, 2003

/s/ Joshua P. Zeldis

Michael K. Kurtis

Joshua P. Zeldis

*Its Attorneys*

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Washington, D.C. 20007  
(202) 328-4500

**AFFIDAVIT**

STATE OF MN :  
COUNTY OF Blue Earth : TO WIT:

I, John W. Finke, am familiar with the facts as set forth in the forgoing Enhanced 911 (E911) Deployment and Implementation Status Report of Minnesota Southern Cellular Telephone Company and Minnesota Southern Wireless Company d/b/a Hickory Tech Wireless and declare, under penalty of perjury, that the facts as set forth therein are true, complete and correct to the best of my knowledge and belief.

Name: John W. Finke  
Title: President - Telecom  
Minnesota Southern Cellular Telephone Company and  
Minnesota Southern Wireless Company d/b/a  
HickoryTech Wireless

I hereby certify that on this 31<sup>st</sup> day of July, 2003, before me, the undersigned Notary Public of said State, personally appeared John W. Finke, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that he/she executed the same for the purposes therein contained.

WITNESS my hand and Notarial Seal.

Linda L. Meyer  
Notary Public

My Commission Expires:  
1-31-2005

